

ABSTRACT OF THE DISCLOSURE

A method of fusion-splicing optical fibers having different mode field diameters or small mode field diameters is provided, which method is advantageous in that the splicing loss is smaller. The method comprises a fusion splicing process in which fusion splicing is performed by butting end faces of two optical fibers together and a heat treatment process in which the fusion spliced part of the optical fibers and the vicinity thereof are heated. The heat treatment process is performed by moving an arc heating unit in a direction other than the Y-axis direction (a direction perpendicular to the Z-axis direction and the opposing direction of arc electrodes) and Z-axis direction (the axial direction of the optical fiber), via the fusion spliced part in a Y-Z plane formed by the Y-axis direction and Z-axis direction.